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**Stakeholder Perspectives on a Tourism-  
Dependent Economy**

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## ***SEMURU Working Paper Series***

# **Stakeholder Perspectives on a Tourism-Dependent Economy**

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### **Abstract**

Tourism is promoted as an environmentally beneficial activity for Caribbean economies. Yet, degradation still occurs and more integrated policy approaches are needed. Using Q-methodology within a social-ecological system (SES) framework, we quantified the importance of various policy issues to stakeholders in Providenciales, Turks and Caicos Islands, where tourism produces 77% of its GDP. Stakeholders agree Providenciales' economy benefits from a healthy marine environment, but disagree over which SES drivers are functionally important. Our results show that Q-methodology is a robust tool for informing the policy-making process and quantifying stakeholder views in a tourism-dependent economy.

### **Keywords**

Social-Ecological Systems; Tourism Policy; Stakeholder Engagement; Q-Methodology

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## **1. Introduction**

For as long as societies have depended upon natural resources for food, livelihood, and cultural expression and identification, there have been conflicts arising from who have rights of access and use of the resource (e.g. Alston et al., 2000; Caldwell, 1970; Foster, 1992; Gadgil & Berkes, 1991; Perry & Vanderklein, 1996). Answering these questions of access rights and benefits forms the basis of modern resource management. In some instances, the conflict over resources is severe, leading to fractured social and economic systems as well as turbulent political conditions (e.g. Le Billon, 2001; Ross, 2004). But for most, user conflict surrounding resource exploitation is far less dramatic, if not totally benign. Instead, conflict plays out as a perpetual driving force within a society's political fabric, influencing day-to-day activities as well as long-term wellbeing (e.g. Collier & Hoeffler, 2005; Frank et al., 2000; Jorgensen, 2009; Schnaiberg & Gould, 2000).

It has been shown that poorly considered policies jeopardize the long-term sustainability of the resource and the quality of ecosystem goods and services it can provide in a degraded, contested state (e.g. Acheson, 2006; Ostrom et al., 2007). How a resource is used and managed ultimately depends upon political will and societal demands, governance structures and responses to those demands, economic factors that establish market and non-market mechanisms for the resource to be captured, and the complex ecological underpinnings surrounding conservation, renewability, and sustainability of the resource. Or, in other words, policy-makers must ask if policy responses to user conflicts improve resource sustainability and economic stability at multiple scales (Grumbine, 1994; Ostrom, 2010). Or are policies improperly constructed, ultimately failing to address conflicts between users and how a natural resource is exploited?

In the modern age of natural resource management, sustainable use and environmental conservation have taken on a prominent role in policy decisions. Natural resources produce ecological, social, and economic goods and services that, to be maintained sustainably and equitably, require careful management and policies that are sensitive to the resource's ecological base and that society's social-economic needs. Global fisheries (e.g. Costello et al., 2012; Pauly et al., 2005; Sumaila et al., 2012; Ye et al.,

2013), energy production (e.g. Bilgen, 2014; Clark, 2012), land use (e.g. Foley et al., 2011; Lambin & Meyfroidt, 2011), and non-extractive economies like tourism (e.g. Hall & Page, 2014; Hunter, 1997) sectors have each recognized the importance of limiting or reversing environmental degradation in their activities. In turn, there are growing efforts to develop more integrated management approaches by encouraging policies that better capture the full breadth of resource use issues and conflicts.

### *1.1 Social-Ecological Systems in Theory and Application*

Social-ecological systems (SES) theory is premised on the idea that “management of selected ecosystems can be improved by learning from a variety of management systems and their dynamics... to mobilize a *wider range* [sic] of considerations and sources of information than those used in conventional resource management” (Berkes & Folke, 1998, 3). Such an adaptive management approach (Armitage et al., 2009) moves toward a fuller, more complex suite of ecological, socioeconomic, and political drivers that shape resource use, sustainability, and resilience under an exploited state (Ostrom, 2009; Walker et al., 2004). SES-informed approaches are considered preferable because they work at negotiating each of the above drivers in tandem rather than isolation. Efforts to simplify, reduce, or simply ignore certain aspects threaten management success because they do not anticipate where change might come from. Instead, SES literature encourages a view that integrates human and natural systems, embracing change and complexity (Berkes et al., 2003). Four systems, each linked to one another at multiple temporal and spatial scales, provide the foundation of SES: ecosystems (i.e. ecological drivers), local knowledge (i.e. social drivers), people and technology (i.e. social and economic drivers), and property rights institutions (i.e. political drivers).

SES planning approaches can yield broad benefits (White et al., 2012). In practice, however, managing four systems as one is a daunting, if not impossible task. The reality is that day-to-day natural resource management tends to be fragmented (Norse, 2010), each system monitored and managed at some level of informational and regulatory isolation. The result is that managers face difficult trade-offs as they seek to respond to the economic, social, and environmental issues that manifest themselves. There is a clear need to provide policy-makers and managers with tools

that handle complexity fluidly, thereby allowing them to become more integrated and SES-based in their approach. The question then becomes clear: which driver(s), as affected by user perspectives and behaviors, should management focus on as immediate issues while not losing sight of long-term goals that are best met through a fully integrated, adaptive SES framework?

### *1.2 Novel Application of Semi-Quantitative Methods in Social-Ecological Systems*

Scholarship in the SES field is centered upon the exhortation that a “common framework to organize findings” (Ostrom, 2009, 419) is vital in the production and accumulation of knowledge surrounding natural resources and their use. This knowledge, coming from a variety of scientific disciplines and management approaches, is then applied to “improve the performance of natural resource systems” (Berkes & Folke, 1998, 2). Social systems – communities, traditional ecological knowledge and tailored management approaches – are elevated by SES, recognizing that managing natural resource systems requires managing the people and communities who use those resources for food, livelihood, and identity. As such, there is considerable interest in the role of stakeholders and communities in managing their natural resources (Reed, 2008), including consultation and direct engagement (K. Brown et al., 2001), policy development (Cohen et al., 2012), and fully integrated co-management situations (Olsson et al., 2004). Further, stakeholders are themselves examined through stakeholder analysis (Grimble & Chan, 2009), traditional ecological knowledge studies (Menziés, 2006), and human subjectivity research (Carr & Heyman, 2012). Together, a more realistic portrait of human behavior, as it relates to resource use and management, regulatory compliance, and measures of resource sustainability and resilience, can be drawn.

One SES-allied approach which researchers have used to gain further critical insights into the human side of environmental issues is Q-methodology. First developed for the field of psychology (Stephenson, 1953), Q-methodology analyzes human subjectivity “in all its forms, in a structured and interpretable form” (Barry & Proops, 1999, 338). Q-methodology converts the subjective views of respondents into analyzable quantitative data, enhancing researcher understandings of stakeholder perceptions and conflicts between users. Q-methodology has been employed in

consumer behavior studies (Sirgy, 1982), social science (Anderson et al., 1997), political science (S. R. Brown, 1980), communication science (Stephen, 1985), education (Bussel, 1998), and human geography (Robbins & Krueger, 2000). More recently, Q-methodology has been employed in revealing human subjectivity and conflict connected to natural resources and their management: forest and watershed management (Webler & Tuler, 2006), regulatory compliance in coral reef fisheries (Carr & Heyman, 2014), and energy policy development (Parkins et al., 2015). Q-methodology may similarly provide analytical power and critical interpretation in tourism studies (Stergiou & Airey, 2011).

For our study, decisions regarding the future development of the Turks and Caicos Islands (TCI) tourism industry could avoid detrimental social and ecological repercussions by resolving conflicts in their prenatal stage. In order to accomplish this, however, policymakers must first be able to identify those conflicts. By using Q-methodology to analyze the views and perspectives of stakeholder groups, policymakers may be able to flag critical SES issues that, if ignored, might prevent the development and implementation of policies that are ecologically sustainable and socioeconomically beneficial. In the case of the TCI tourism industry, particularly its present and future development in Providenciales, addressing these conflicts is essential. Tourism in the greater Caribbean region is notoriously finicky (Carr & Heyman, 2009; Laframboise et al., 2014), and the past performance of the tourism industry in Providenciales is not a guarantee for its future success. With a tight connection between TCI tourism and its marketed image as a pristine tropical marine destination, SES-constructed, stakeholder-informed policies that guide future growth are necessary.

## **2. Site Description and Methodology**

### *2.1 Site Description*

The study was conducted in Providenciales, TCI, British Overseas Territory (21° 50' N, 72° 16' W). Known locally as “Provo”, the low-lying island is located on the northwestern edge of the Caicos Bank (Figure 1). Providenciales is the largest island in the TCI in terms of population, with approximately 33,000 residing there, and third largest by area (122 km<sup>2</sup>). The TCI economy is dominated by tourism, with

approximately 78% of the territory's \$632-million GDP generated by the service sector (CIA, 2015). In 2014, the territory received 435,475 stop-over visitors (TCI Tourism Board, 2015), the vast majority arriving through Providenciales International Airport and staying at one of the many resorts and hotels dotting the northern shore of Providenciales from Turtle Cove and down the entire 19-km (8-mi) length of Grace Bay. Grace Bay in particular has undergone an extensive development boom in the past couple of decades, with the area having played a significant role in helping Providenciales earn its spot as a globally recognized premier island destination (Tripadvisor, 2015). Providenciales boasts 34 major resort hotels, numerous residential condominium developments, an 18-hole golf course, and plentiful shopping and restaurant options within easy walking distance from the beachfront.

**Figure 1.** Providenciales, Turks and Caicos Islands, including study sites.

Retreating inland and to the west along Airport Road, the tourism scene begins to fade into local residential neighborhoods and small, locally owned businesses. The local community is broken down into two general categories: “Belonger” and “Non-Belonger”. Being a Belonger is a legal classification for the British Overseas Territories based on residency, family history, and birthright status requirements. Belongers maintain certain rights, including the right to vote, reside without immigration restrictions, and seek employment without a work permit. Non-Belongers, meanwhile, are distinguishable principally through their own immigration status as well as that of their immediate family. Most Non-Belongers hail from Haiti, the Dominican Republic, and The Bahamas. Non-Belongers, some of whom are undocumented (Ferguson, 2003), outnumber Belongers in the TCI, comprising 57% of the adult population (TCI Government, 2012).

Regardless of identity, legal status, or primary language spoken, most residents in Providenciales are employed within the tourism industry sector, filling both skilled and unskilled labor positions. Non-Belongers have come to take many jobs throughout the tourism industry. Documented Non-Belongers possess work permits that typically must be renewed annually, though some may extend out as much as five

years. Tourism has moved to lower real wages in response to permitting restrictions, a surplus work force, and incentives for hiring non-permitted workers on a temporary or non-documented basis. In response, skilled workers, particularly those from the Belonger community, are increasingly seeking higher-paying work outside both the tourism sector and the territory itself (TCI Government 2015).

## *2.2 Methodology*

The development of the Q-methodology follows five steps: development of the 'Q Concourse', construction of the Q-set, selection of Q subjects, subject responses and sorting (Q-sort), and data analysis. For this study, a 'ready-made' Q concourse was selected (McKeown & Thomas, 2013). Using literature and policy reviews, press reports, publications, and website materials from academia, the TCI government, think-tanks, and regional organizations representing the tourism sector and relevant stakeholder groups, thirty-nine student researchers at the School for Field Studies in South Caicos, TCI, produced 138 unique statements concerning tourism and tourism development in the TCI. Each statement was then sorted into one of four SES systems: ecological, economic, social, or political. The researchers then identified the final 15-statement Q-set that best identified the full range of SES issues at play in Providenciales' tourism sector. This was done by having each researcher select three statements within each sphere, for a total of twelve 'votes'. Votes were tallied and the top three votes in each sphere were included, as well as the top remaining three vote getters not initially selected. The Q-set was then edited for consistency and clarity.

On March 17, 2015, researchers conducted visited six predetermined sites around Providenciales (Figure 1). These sites represent locations frequented by tourists and local community members, although not necessarily in balanced numbers. After being guaranteed anonymity and providing verbal consent, participants were asked to sort each of the 15 statements (the Q-sort) from the Q-set within a defined quasi-normal curve following the design of Carr and Heyman (2012). Each slot on the curve could only receive one statement, and all 15 slots needed to be filled without changing the shape and distribution of the curve (Table 1). The score of -3 represents the single statement that respondents most strongly disagreed with, while the score of +3 represents the statement they most strongly agreed with. Researchers did not provide



additional information for any statement, and only answered questions that improved clarity of the instructions. Once all 15 statements were sorted, respondents gave a brief explanation on why they selected the two statements they most disagreed and agreed with. Researchers then completed the interview by collecting basic demographic information. The entire process of the Q-sort, post-sort interview, and collection of demographic information took ten to twenty minutes to complete. Q-sorts were then compiled into a database, and researchers removed incomplete responses.

**Table 1.** Q-set distribution and frequency of responses (from Carr and Heyman 2012).

Three analyses were conducted using the software PQMethod (Schmolck, 2015, v2.35):

- 1) Belonger respondents ( $n_B = 55$ )
- 2) Non-Belonger respondents ( $n_N = 25$ )
- 3) Researcher respondents ( $n_R = 36$ )

For each analysis, PQMethod was used to complete principal component factor (PCF) analyses as well as correlation analyses between respondent Q-sorts. Underlying factors within each round of analysis were identified via eigenvalues and z-scores calculated by PQMethod's Varimax rotation process. Factors were kept when eigenvalues were greater than one (Addams & Proops, 2000) and plotted values also passed a visual scree test, following the methodology of Cattell (1966). Factors were then isolated and connected to survey respondents and demographic information, forming sub-populations of like-minded individuals. These flagged factors were used to highlight the particular perspectives and biases of these sub-populations, with the purpose of teasing out subtle differences within the larger sampled population. Following all Q-methodology analyses, all responses ( $n_{All} = 281$ ) were sorted by stakeholder demographic group (Belonger, Non-Belonger, Researcher, and Tourist) and converted into a seven-point Likert Scale, following Danielson (2009). Mean

Likert Scale responses for each demographic group were reported, and a final rank order of each statement was determined based on the mean of all responses.

### *2.3 Methodological Limitations*

The Q Concourse is generally constructed through the results of extended, open-ended interviews with targeted stakeholder groups (S. R. Brown, 1980). Two key limitations prevented such an ‘naturalist’ approach (McKeown & Thomas, 2013), in conducting this study. Foremost, Providenciales is located nearly 80 km from South Caicos. This made identifying and communicating with key stakeholders very difficult, and extended engagement, conducted either in-person or remotely via telecommunications impractical. Secondly, engaging with the tourist stakeholder ‘community’, outside of the single, opportunistic interview on March 17, 2015, was impossible, given their short visit length. Instead, a rich review of materials concerning tourism development and associated SES impacts, Providenciales, and key tourism policies was conducted prior to conducting the study, which ultimately formed the researcher-driven Q-set used. This approach is not particularly unusual nor a methodological weakness, as the comprehensive review conducted meets the guidance of Watts and Stenner (2005, 75), who note, “the exact nature of the sampling task is of *little consequence* provided the final Q-set can justifiably claim to be ‘broadly representative’ of the relevant opinion domain” [emphasis added]. The approach also allowed researchers to develop a novel test on researcher bias, the reflective introduction and application of SES principles in a research setting, and expanded social science practitioner definitions of stakeholder groups.

In a similar fashion, the final choice to use a 15-statement Q-set was made following internal pilot testing and discussions between researchers. Foremost, the final Q-set was required to reflect a broadly representative framework of relevant tourism-tied SES aspects in Providenciales. A goal of ten minutes per Q-sort was set, following conversations with hotel, government, and business professionals living and working in Providenciales. Two pilot runs were then conducted with Q-sets of 15 and 26 statements. The 26-statement run was deemed unsatisfactory on both time length and difficulty in managing the actual Q-sorting exercise, given the challenges of reading, comparing, and then sorting statements. As a result, the 15-statement Q-set was used. And though a 15-statement Q-set falls on the low end of Q-methodology in terms of

numbers of statements, it is similar in size to other Q-methodology studies that sought to strike the delicate balance between the scope of research questions and the capacity of targeted respondents to answer them in a clear and considered manner through their Q-sort (e.g. Albizua & Zografos, 2014; Brannstrom, 2011; Carr & Heyman, 2012; Nijnik & Mather, 2008; Størksen & Thorsen, 2011; Taylor et al., 1994). Practitioners of Q-methodology are encouraged to remember that the Q-set need only “contain a representative *condensation of information*” [emphasis in original] (Watts & Stenner, 2005, 75). No matter how thorough, a Q-set is unlikely to ever fully capture the entire range of perspectives, and that research aims should seek to weigh full stakeholder participation as equally as other elements of Q-methodology. In this research, this meant accepting a shorter length Q-set built upon relevant SES aspects of tourism in Providenciales rather than risking insufficient participation of key stakeholder groups.

While there is some literature on normative roles of researchers in relation to study design, test population interactions, and analytical avenues available (Aldridge & Levine, 2001), there is no explicit prohibition on whether researchers cannot sort and analyze their own Q-set in a rigorous manner alongside others. Researchers' responses can help compare how SES considerations are held by other community groups, who are unlikely to be familiar with SES or Q-methodology. Researcher perspectives help identify which issues researchers might emphasize because of their own backgrounds, training, and biases, but may not be particularly important to community members. From a policy perspective, such responses might be considered to represent the views of the expert ‘epistemic community’ (Haas, 1992).

### **3. Results**

#### *3.1 Analysis of Q-Sort scores and correlation for Belongers*

For the Q-methodology analysis of Belongers ( $n_B = 55$ ), Table 2 provides a full comparison, including z-scores, of the analysis. Belonger responses underwent PCF, and eight eigenvalues were calculated. Eigenvalue and follow-on scree analyses supported the inclusion of four factors (B1, B2, B3, and B4), representing 61% of the explained variation. The color codes seen in Table 2 follow the quasi-normal curve frequencies presented in Table 1, with the strongest disagreement within each sub-

group coded red, and strongest agreement coded dark blue. Z-scores are reported for each factor along the range  $-3 < z < +3$ . Where z-scores are significantly significant, Table 2 identifies such scores to be ‘defining’ for the group (McKeown & Thomas, 2013) at both  $p \leq 0.05$  and  $p \leq 0.01$  levels.

**Table 2.** Statements and z-scores for Belongers (B), and Non-Belongers (N). Color-coding follows Table 1. Significant at: \* ( $p \leq 0.05$ ); \*\* ( $p \leq 0.01$ ).

Group B1 ( $n = 16$ ) was principally distinguishable from other Belonger groups by their view that tourism dominates the economy and job opportunities on Providenciales ( $z_{14} = 1.84, p \leq 0.01$ ). The views on tourism within Group B1 are largely negative, perceiving tourism to not be environmentally friendly ( $z_{10} = -0.89, p \leq 0.01$ ). They extend the responsibility of poor environmental stewardship also to government agencies and policies ( $z_4 = 0.45, p \leq 0.01$ ). This harshly negative view of tourism and local government actions is reinforced by a more widely shared belief that tourism is given preferential treatment by government ( $z_5 = -1.78$ ), and that policies are tailored to support tourism over other interests ( $z_6 = -1.08$ ). And though Group B1 believes the TCI need to prepare for the impacts of climate change ( $z_7 = 0.93$ ), their concerns with local development, government preference for tourism interests, and tourism-related environmental damage means that climate change is not the major threat to the territory ( $z_{12} = 0.03$ ).

Group B2 ( $n = 19$ ) was defined by their strong, positive connection they feel with their island. This connection is seen culturally within the local community ( $z_2 = 1.16, p \leq 0.01$ ) and as a draw for tourists ( $z_3 = 0.84, p \leq 0.05$ ), who forgo certain amenities when visiting so as to help protect the island’s environment ( $z_{13} = 0.34, p \leq 0.01$ ). They have strongly positive views on the potential benefits of marine protected areas for protecting their island’s marine life ( $z_{11} = 1.54, p \leq 0.01$ ), and unlike other Belonger groups, have a small, but positive perspective that environmental policies broadly respond to all stakeholder group concerns ( $z_6 = 0.07, p \leq 0.01$ ). Like B1, Group B2 feels that the government representation is inequitable ( $z_5 = -2.00$ ), and share a positive, statistically significant consensus view ( $p \leq 0.05$ ) with all Belonger

groups that tourism in the TCI depends upon a healthy marine environment ( $z_1 = 0.85$ ).

Group B3 ( $n = 8$ ) was defined by a far more muted overall view on the importance and reliance of the tourism industry in Providenciales. They do not believe that economic policies are damaging the environment ( $z_4 = -1.96, p \leq 0.01$ ), and scored the highest z-score amongst all Belongers on government representing all stakeholders equally ( $z_4 = -0.01, p \leq 0.01$ ), albeit this statement ranked tenth highest for Group B3. And while the group shares a view that there are limited jobs outside of tourism in Providenciales ( $z_{14} = 0.34, p \leq 0.01$ ), the statement is muted compared to Group B1 ( $z_{14} = 1.84, p \leq 0.01$ ), B2 ( $z_{14} = -0.92$ ), or B4 ( $z_{14} = -1.33, p \leq 0.05$ ). When isolating demographic information for Group B3, the rationale for their views becomes much clearer. Of the eight individuals, none work directly in tourism, although two work in construction and one in retail. The remaining five individuals hold occupations outside tourism, running their own small businesses (e.g. a hair salon and marketing firm) or work in government positions (e.g. public librarian). In comparison, Group B1 has six individuals working at resort hotels or tourist-oriented businesses, Group B2 has eight, and Group B4 has three. While such a sample is not representative of the larger Providenciales community, nor should it be under the methodological prescriptions of Q-methodology, it does help provide qualitative contrast that helps better define differences between the Belonger groups.

Group B4 ( $n = 12$ ) represents a more complex perspective on TCI tourism and its environmental and socioeconomic impacts in Providenciales. They do not feel that employment is limited to the tourism sector ( $z_{14} = -1.33, p \leq 0.05$ ) and carry strong negative views on the ability of government to represent stakeholders equally ( $z_5 = -0.68, p \leq 0.05$ ). Unlike other Belonger groups, Group B4 does not feel like Turks and Caicos Islanders have strong cultural ties to the marine environment ( $z_2 = -0.67, p \leq 0.05$ ). Finally, Group B4 possesses the strongest perspectives on climate change and how its impacts might be felt in the TCI. As being the “major threat to the TCI and its economy”, Group B4 scored highest ( $z_{12} = 0.34, p \leq 0.05$ ). They also scored highest on the need for the TCI to “prepare for negative impacts of climate change ( $z_7 = 1.05$ ), though this z-score was not statistically distinguishing. Viewed as a whole, the z-score responses of Group B4 reflect a nuanced sense that Providenciales and the TCI are at

risk from a variety of local and distant activities, including tourism development. They see themselves as central to any action, and feel collectively that they can make a difference in shaping the future path of the TCI and Providenciales. On the subjects of education ( $z_8 = 2.49$ ), educating tourists ( $z_9 = 0.17$ ), and perceiving tourism in Providenciales as environmentally friendly ( $z_{10} = 0.21$ ), Group B4 scored highest amongst all Belongers.

### *3.2 Analysis of Q-Sort scores and correlation amongst Non-Belongers*

For the Q-methodology analysis of Non-Belongers ( $n_N = 25$ ), Table 2 provides a full comparison, including z-scores, of the analysis. Non-Belonger responses underwent PCF, and eight eigenvalues were calculated. Eigenvalue and follow-on scree analyses supported the inclusion of four factors (N1, N2, N3, and N4), representing 65% of the explained variation.

Group N1 ( $n = 10$ ) holds very strong views on the health and importance of the marine environment for Providenciales and the TCI. Group N1 alone was statistically distinct in supporting the statement that TCI tourism is dependent on the health of the marine environment ( $z_1 = 1.13$ ,  $p \leq 0.01$ ), and believe that marine protected areas would help protect marine resources there ( $z_{11} = 1.69$ ,  $p \leq 0.01$ ). This pro-environmental ethos extends to a belief that the TCI needs to begin preparing for the impacts of climate change ( $z_7 = 1.38$ ,  $p \leq 0.01$ ). It also is reflected in Group N1's decidedly pessimistic views on how the marine environment is used and the larger commitment of both Turks and Caicos Islanders and tourism has toward ensuring a healthy environment. Group N1 does not sense a strong cultural relationship between islanders and the marine environment ( $z_2 = -1.41$ ,  $p \leq 0.01$ ), and do not believe that tourism is environmentally friendly ( $z_1 = -1.23$ ,  $p \leq 0.01$ ).

Group N2 ( $n = 7$ ) reflects strongly contrasting views compared to Group N1. They do not feel that tourism depends on a healthy marine environment ( $z_1 = -0.10$ ), and discount the threat of climate change ( $z_{12} = -0.76$ ,  $p \leq 0.05$ ) or that the TCI should begin addressing it ( $z_7 = -0.87$ ,  $p \leq 0.05$ ). Group N2 also is much more optimistic on the islands' cultural draw for tourists ( $z_3 = 1.78$ ,  $p \leq 0.01$ ), and the ability of the island community and tourism industry to highlight and inform tourist perspectives on the

environment ( $z_9 = 0.89, p \leq 0.01$ ). This view that tourists leave the TCI with a better sense of the marine environment is unique across all Belonger and Non-Belonger groups. This perspective is important as, of the seven members of Group N2, five work directly in the tourism industry, and three worked in the tourism industry in their home islands prior to arrival to Providenciales. In follow-up interview notes, this perspective is built from their daily interactions with tourists and profit-driven tourism industry. Tourism in the Caribbean often markets a particular experience that may not rely upon a healthy marine environment but merely the prospect or image of one for eager but under-informed tourists (Aldridge & Levine, 2001).

Group N3 ( $n = 5$ ) holds an adversarial view of the relationship between residents of Providenciales and tourists who outnumber them at a rate of 13:1 (Addams & Proops, 2000). Residents have strong cultural ties to their marine environment ( $z_2 = 1.53, p \leq 0.01$ ), yet believe that tourists do not forgo certain amenities when they visit ( $z_{13} = -1.84, p \leq 0.01$ ), suggesting that tourism and tourists hold a large portion of responsibility for the state of the island and its marine environment. This perspective is further supported by Group N3's sense that tourism is not dependent upon a healthy marine environment ( $z_1 = -0.51$ ), the lowest Non-Belonger z-score for the environmental friendliness of tourism in Providenciales ( $z_{10} = 0.16$ ), and that environmental policies in the TCI do not address the concerns of all local stakeholders ( $z_6 = -1.45$ ). Of the five members of Group N3, four work in low-paying, unskilled tourism positions (e.g. beach attendant, hotel cleaning services) that are expected to have minimum interaction with tourists.

Group N4 ( $n = 3$ ) presents some challenges in interpreting their z-scores. For example, they scored the highest of all Belonger and Non-Belonger groups in their belief that economic policies are damaging to the TCI environment ( $z_4 = 1.24, p \leq 0.01$ ), yet their highest rated statement that tourism, the major economic sector in the TCI, is environmentally friendly ( $z_{10} = 1.59, p \leq 0.01$ ) and that jobs exist outside that sector ( $z_{14} = -1.36, p \leq 0.01$ ). They strongly doubt the threat of climate change to the TCI ( $z_{12} = -2.05, p \leq 0.01$ ), and hold the highest z-scores for equal stakeholder representation by the TCI government ( $z_5 = 0.00$ ), and that policies address the concerns of local stakeholders ( $z_6 = 0.21, p \leq 0.01$ ). These seemingly contradictory views suggest issues with the Q-set responses themselves. A follow-on single-tailed t-test ( $p \leq 0.05$ ) confirmed, however, that the responses were statistically unique from

other Non-Belonger responses, and so Group N4 was retained. Though reasons for these contradictions may be speculated upon, there is little evidence to support one theory over another. As such, though included in the Q-methodology and presented in Table 2, Group N4's contribution to the discussion and policy aspects of the study are minimal.

### *3.3 Analysis of Q-sort scores and correlations for respondents*

For the analysis of Respondents ( $n_R = 36$ ), three factors (R1, R2, and R3) were kept following PCF, eigenvalue, and scree analyses, representing 76% of the explained variance.

Group R1 ( $n = 13$ ) is similar to Group N3 in their adversarial views on tourism, tourists, and how they impact Providenciales. Group R1 is defined by their belief that tourists do not forgo certain amenities ( $z_{13} = -1.67, p \leq 0.01$ ), and that environmental policies do not address the concerns of all local stakeholders ( $z_6 = -0.42, p \leq 0.05$ ).

Group R2 ( $n = 11$ ) is distinct in the view that climate change is the major threat to Providenciales and the TCI ( $z_{12} = 1.29, p \leq 0.01$ ). This perspective is reinforced by their belief that there are few jobs outside of tourism in Providenciales ( $z_{14} = 1.75, p \leq 0.01$ ), a view that ranked highest for the 15 statements scored by Group R2, and very similar to Group B1.

Group R3 ( $n = 12$ ) held a strong perspective that the TCI needed to prepare for the impacts of climate change ( $z_7 = 1.10, p \leq 0.01$ ), although they do not believe that climate change is the major threat to the TCI ( $z_{12} = 0.38$ ). This view stands in stark contrast to Group R2, who had a non-defining z-score of 0.45 for Statement 7 and 1.29 for Statement 12. This suggests that Group R3 has a sense that local issues are critically important. Other statements, though not statistically defining, help support this comparison of Group R2 (i.e., global concerns are more pressing) and R3 (i.e., local concerns are more pressing).

Group R2 was identical to Group R1, with a z-score of -1.01, in their perception of the environmental friendliness of Providenciales' tourism industry. But while low, they were not nearly as low as Group R3 ( $z_{10} = -1.39$ ), that group's lowest scoring



statement. The branding effort known broadly as eco-labeling is seen as locally driven initiatives within the tourism industry. Group R2 doesn't believe that eco-labeling appeals to tourists ( $z_{15} = -0.44$ ), but Group R3, sensing that local actions can help solve local issues, are defined, though very weakly, by support for eco-labeling as a means of appealing to a certain type of tourist market, with a z-score of 0.20 ( $p \leq 0.01$ ).

On the potential local benefits of marine protected areas, Group R3 ( $z_{11} = 1.30$ ) scored higher than both R2 ( $z_{11} = 0.95$ ) and R1 ( $z_{11} = 0.69$ ). Finally, Group R3 is the most pessimistic group in terms of viewing that government policies represent all stakeholders equally ( $z_5 = -1.35$ ), that environmental policies address local concerns ( $z_6 = -1.10$ ).

For their differences, particularly between Group R2 and R3, several areas of statistically relevant consensus exist between respondents, unique for the study. Such consensus suggests that the Researchers do carry some characteristics of an informed expert community with shared values and broad agreement (Haas, 1992). Compared to Belongers, who agreed only on the point that tourism depends on a healthy marine environment ( $\bar{z}_7 = 0.67, p \leq 0.05$ ), and Non-Belongers, who shared no consensus statements, Researchers carried a consensus opinion for four statements (Table 3). They agree that education is the key for ensuring a stable future for the marine resources in the TCI ( $\bar{z}_8 = 1.68, p \leq 0.01$ ), that tourists tend to not leave the TCI with a better understanding of the local natural environment ( $\bar{z}_9 = -0.79, p \leq 0.01$ ), and do not believe that tourism in Providenciales is environmentally friendly ( $\bar{z}_{10} = -1.14, p \leq 0.01$ ). Researchers share a pragmatic view, illustrated by a z-score near zero, that economic policies may be damaging to the TCI environment ( $\bar{z}_4 = -0.04, p \leq 0.05$ ).

**Table 3.** Statements and mean Likert scores for Belongers, Non-Belongers, Researchers, and Tourists. Color-coding follows Table 1.

As Table 2, for Belongers and Non-Belongers, shows, within-group contrast on the Q-set statements is apparent. Stepping back to examine mean Likert scores, there is

considerable apparent agreement between groups, and importantly, between tourists ( $n_T = 165$ ) and locals (Table 3). Groups agree on the importance of education, ranking it highest of all statements (Statement 8), and that there is tangible, local conservation value generated by marine protected areas (Statement 11). All groups broadly agree in the need for local TCI action to prepare for climate change impacts (Statement 7), that environmental policies do not address the concerns of all local stakeholders (Statement 6), that tourists do not forgo amenities (Statement 13), and have a weakly negative view on the potential value of ecolabeling (Statement 15).

In-group differences that arise from the unique conditions and circumstances of each demographic group are also apparent. Most groups agree that tourism in the TCI is dependent on the health of the marine environment, with the exception of Non-Belongers (Statement 1). Non-Belongers are also alone in their view that Turks and Caicos Islanders have strong cultural ties to the marine environment (Statement 2). Researchers and tourists also find themselves sharing views, though not always in equal relative measure based on Likert scores.

On the subject of tourists coming to experience the culture of the TCI, residents (both Belongers and Non-Belongers) believe that culture is part of the attraction and allure of Providenciales and the TCI. This view is not shared by the non-resident Researchers and Tourists (Statement 3). In fact, Statement 3 ranked the lowest for Researchers, an indication of a considerably dim view of tourists and tourist behaviors in a tropical island destination. This view is reinforced by Likert scores from Statement 9, on the potential that tourists leave the TCI with a better understanding of its natural environment. Non-residents also hold negative views on whether Providenciales tourism is environmentally friendly, while residents perspectives are much more muted.

In the final, full comparison of Table 3, preconceptions on the biased views of each group is readily seen. Researchers, educated and working in the environmental field, tend to support statements that positively frame education (Statement 8), bring a focus on hot-button issues like climate change (Statements 7 and 12) and define clear conservation actions (Statement 12). Tourists, who would be expected to hold a much wider range of perspectives, express agreement with other groups on positive, aspirational statements (Statements 1, 2, 5, 6, 8, and 14).

The differences between Belongers and Non-Belongers are more sensitive, and reflect perceived relative social position in Providenciales. There are clear economic and social benefits conferred upon Belongers, and Likert scores in Table 3 reflect this key difference. Belongers believe that tourism requires a healthy marine environment (Statement 1), and that their island economy is not solely dependent upon tourism (Statement 14). Yet, research has shown that tropical destination tourism may not actually require a healthy marine environment to be successful (e.g., Carr & Heyman, 2009). This realization further underlines the importance of environmental education (Statement 8). Coming from other islands where they may have experienced the vivid contrast of a pristine tourist setting and the degraded environment and communities just beyond a resort's walls (e.g. Cabezas, 2008), Non-Belongers, as a group, do not share that perspective with their Belonger counterparts. Instead, Non-Belongers believe that tourism is not guaranteed to succeed as either a long-term economic or environmentally benign activity. Local behaviors and perspectives (Statement 2), as well as appropriate economic and environmental policies and governance (Statements 4, 5, and 6) are crucial.

## **5. Discussion**

### *5.1 Identifying Stakeholder Differences in Perspectives*

The TCI tourism industry currently finds itself at a crossroads, at which seemingly standard decisions can have tremendous influences on the longstanding development and trajectory of the territory's economy and environmental health. Identifying the drivers that shape complex relationships between the four SES systems, then accounting for them in an integrated and cohesive policy can be exceedingly difficult. Policy development instead tends to center on politically expedient responses to specific issues, often derided as taking the 'band-aid' approach (Fulton et al., 2011, 8). This research shows that it is possible, however, to identify issues of immediate concern within stakeholder groups, while also highlighting pathways to long-term sustainability. Using Q-methodology to account for the range of stakeholder perspectives, this research has revealed several distinct viewpoints about both the current state and the future direction of tourism in the TCI.

As seen across nearly all groups (Table 3), broadly defined respondent groups (i.e. Belonger, Non-Belonger, and Researcher) believe that policies appear to strongly favor tourism and marginalize local stakeholders, particularly those not employed within the tourism sector. While favoring tourism may be necessary for Providenciales, perceived disregard for affected local community members can ultimately fracture local support and derail growth. Tourism throughout the region has shown a stark divide in socioeconomic benefits, despite a generally agreed upon conclusion that tourism is an economic benefit at regional and national scales (e.g. Amaghionyeodiwe, 2012; Carr & Heyman, 2009; Freitag, 1994; Pattullo, 2005).

Building on education efforts toward both tourist and local stakeholders should continue to be a priority for the TCI (Statement 8), as greater attitudinal awareness to the positive and negative aspects of tourism can be parlayed into increased stakeholder participation. Tourists can support various conservation efforts, such as eco-labeling (Statement 15), if they understand the rationale and ultimate goals of such strategies, and how small changes in their behavior (Statement 13) can have large positive impacts. Similarly, the tourism sector can improve their standing with local stakeholders by expanding outreach efforts and demonstrating their commitment to a healthy community and environment (Statement 10). Z-scores from Belonger and Non-Belonger stakeholder groups reveal that perspectives are sufficiently complex to move beyond single-issue management. This means that the tourism industry, which tends to focus on short-term economic growth and capturing market share, might benefit by shifting toward a more nuanced, multi-faceted policy framework that champions ecological and socioeconomic issues in equal measure.

### *5.2 Integrating Local Stakeholder Views into Tourism Planning*

Benefits can be found when tourism-dependent economies engage with their local communities. Yet, it can be difficult to account for local concerns, much less address them, when the economic pressures from within the tourism sector are pervasive. As tourism is the number one economic sector in the Caribbean, with a total annual contribution to the region's GDP of US\$49-bn (Turner, 2014), governments work hard to court and keep tourism on their respective shores. Governments are dedicated to gaining development interest, and then securing those interests over time. Simultaneously, competition for tourists between destinations is fierce. As a direct

response to this competition, two basic paths emerge: large-scale, discount tourism, or high-end tourism that caters to a specific market group (Carr & Heyman, 2009). Both pathways can provide valuable contributions to their respective economies. Both also have their own unique set of environmental and community impacts that require tailored, effective policies (McLaren, 2003).

Providenciales actually pursues both avenues, with low-cost, family-oriented resorts like Club Med Turkoise, and up-scale retreats like Amanyara Resort, which caters to a highly personalized experience. Both styles reflect ‘enclave-style’ tourism that removes guests from the surrounding local community. Yet, they do so at their own peril, given the ease with which such tourism destinations can replace one another. As seen with local stakeholder responses, there are few tangible connections between the culture of the TCI and tourism. While not likely to be a major draw compared to the natural beauty of Grace Bay in the immediate future, developing industry outlets that highlight Providenciales and TCI culture can help generate connections that retain market share through repeat visitors. The TCI has a rich natural and cultural history. Building upon such a history can benefit conservation efforts when tourists link community welfare and pride to the environmental health of the island (Scheyvens, 1999). In doing so, such community-oriented policies become supported within a SES framework.

### *5.3 Expanding Concepts of Researcher Roles in SES Research*

Achieving sustainable SESs requires a comprehensive understanding of the dynamic relationships between resource units, resource users, and policy-makers (Ostrom, 2009). Scientists interested in promoting the sustainability of resource units have provided a great deal of scientific knowledge, yet a dearth of resource management success stories continues to plague ecosystems around the world. The practical application of SES principles in resource management must be allowed to continue maturing. Accepting system complexity and acknowledging the effects of uncertainty has not slowed the potential of SES-structured policy recommendations for managing economically and culturally important natural resources, especially in data-limited situations (Carr & Heyman, 2014).

This research highlights the need to continue seeking and quantifying stakeholder perspectives and input, a foundational component in Q-methodology that provides

much of its analytical strength. The purpose of the researcher-designed Q-sort is not to supersede or replace stakeholder views with those of SES experts, but to assess stakeholder sophistication and perspective complexity in a reflective process. There will always be a need for experts and stakeholders to join in policy discussions. Employing a researcher-designed Q-set that is sensitive to a range of stakeholder issues may shorten the distance required to bring those perspectives to the policy table, while iteratively reducing system uncertainty that plagues the decision-making process. Stakeholder perspectives are still identified by factors and z-scores. Follow-up questioning provides the vital insights that can help inform discussions and guide more inclusive, broadly supported policies. Follow-on work and continued stakeholder participation, either directly at the policy table or through studies such as these, can encourage adaptive management opportunities, another hallmark of the SES approach.

Results from this study show that Q-methodology is successful in revealing the range of perspectives within demographically defined groups interacting in a tourism-dominated economy and island. As seen in Table 3, SES researcher perspectives are generally in line with the more broadly held views of interviewed stakeholders, although there are some areas (Statements 3 and 12) where disagreement is apparent. This suggests that, at least in the case of Providenciales, researchers have an informed understanding of Providenciales' tourism industry. Results from the study measured local attitudes toward tourism and government policy supporting tourism. Q-methodology analyses were able to link these perspectives to the SES drivers that direct the shape and character of Providenciales' tourism industry, its Belonger, Non-Belonger, and Tourist communities, and health and functionality of its ecosystem.

## **6. Conclusions**

Tourism accounts for 77% of the GDP of TCI, and that percentage rises to nearly 98% when including the construction sector (TCI Tourism Board, 2015). Further, the TCI is the number one destination in the world in terms of per capita visitor arrivals per resident, with nearly 13 tourists for every resident. The tourism industry in the TCI has, and will continue to have a disproportionately large influence over the territory's future. Continued reliance on tourism in the TCI will produce unique SES stresses,

and so tourism-focused policies would be wise to proactively address them so as to not jeopardize the territory's future economic wellbeing and environmental health. Improving policies requires sensitivity to stakeholder perspectives as they relate to the breadth of issues that may require management responses. Q-methodology is a uniquely valuable policy tool because it successfully identifies and quantifies a range of stakeholder perspectives. Policy-makers can use Q-methodology analyses to inform the decision-making process by highlighting stakeholder perspectives as they relate to the environment and economy. Voicing community concerns, as can be done through Q-methodology, is a positive step toward greater stakeholder participation and more inclusive policies that would enjoy greater support and likelihood of success. With Q-methodology, policy-makers are better equipped to not only develop SES-attuned responses to the pressing needs of today, but also anticipate future considerations that stakeholders hold important.

Although these findings will be useful for guiding the future development of Providenciales, applying these lessons to the various tourism industries found throughout the Caribbean region is where the true value lies. Tourism accounts for \$49 billion of the region's GDP, making the Caribbean the number one region in the world in terms of tourism's proportional contribution towards GDP (Turner, 2014). Further, there is abundant evidence that policies that ensure the health and functionality of marine ecosystem goods and services add significant value to tropical tourism destinations like Providenciales (e.g. Hawkins et al., 2005; Heyman et al., 2010; Hunter, 1997). It is a hopeful sign that the majority of respondents from this study do believe that a healthy marine environment is important for tourism in the TCI. Policies that focus principally on economic growth and expansion may neglect the essential ecological and social drivers that play vital roles in the long-term health, functionality, and draw of island destinations like Providenciales. The TCI does not need to look too far to see what a vibrant tourism industry (Turner, 2015), built upon a stressed and heavily degraded marine environment (Burke et al., 2011), looks like (Carr & Heyman, 2009). A healthy marine environment is important to the TCI economy and communities, and should be safeguarded.

The growth and importance of tourism in the TCI is a microcosm of a larger phenomenon currently occurring throughout the Caribbean. Finding SES-positive pathways that expand economic, social, cultural, and environmental benefits beyond

the tourism sector will help garner stakeholder support and policy legitimacy. In the case of Providenciales, this will require pro-environmental policies, given the keen sense of connection between tourism and the marine environment. Tourist and most local stakeholder groups recognize the value of a healthy marine environment for tourism, and so the government should pursue 'smart growth' policies (McLaren, 2003) that safeguard the environment and natural beauty of Providenciales. Demonstrating a commitment to environmental stewardship and community regard will help make tangible their marketing slogan of being 'beautiful by nature' (TCI Tourism Board, 2015).

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**Table 1.** Q-set distribution and frequency of responses (from Carr and Heyman 2012).

	<b>Strength of Disagreement</b>			<b>Neutral</b>	<b>Strength of Agreement</b>		
<b>Value</b>	-3	-2	-1	0	+1	+2	+3
<b>Frequency</b>	1	2	2	5	2	2	1

**Table 2.** Statements and z-scores for Belongers (B), and Non-Belongers (N). Color-coding follows Table 1. Significant at: \* ( $p \leq 0.05$ ); \*\* ( $p \leq 0.01$ ).

Statement	B1 n=16	B2 n=19	B3 n=8	B4 n=12	N1 n=10	N2 n=7	N3 n=5	N4 n=3	Statement
<b>1</b>	0.49	0.85	0.54	0.79	1.13**	-0.10	-0.51	-0.55	Tourism in the TCI is dependent on the health of the marine environment.
<b>2</b>	0.21	1.16**	0.05	-0.67**	-1.41**	-0.67	1.53**	-0.58	Turks and Caicos Islanders have strong cultural ties to their marine environment.
<b>3</b>	0.02	0.84*	0.30	0.20	-0.38	1.78**	-0.35	-0.17	Tourists come to experience the culture of the TCI.
<b>4</b>	0.45**	-0.70	-1.96**	-0.91	0.16	-0.08	-0.63	1.24**	Economic policies are damaging to the TCI environment.
<b>5</b>	-1.78	-2.00	-0.01**	-0.68**	-1.39	-1.82	-0.52	0.00	TCI government represents all stakeholder groups equally.
<b>6</b>	-1.08	0.07**	-0.70	-1.09	-0.63	-0.89	-1.45	0.21**	Environmental policies in the Turks and Caicos Islands address the concerns of all local stakeholders.
<b>7</b>	0.93	-0.9**	0.57	1.05	1.38**	-0.87*	0.50	-0.17	The TCI need to prepare for negative impacts of climate change.
<b>8</b>	1.37	1.23	2.25	2.49	0.96	0.64	1.90	1.25	Education is the key for ensuring a stable future for the TCI's marine resources.
<b>9</b>	-0.59	-0.83	0.05	0.17	-0.50	0.89**	-0.23	-0.63	Tourists leave the TCI with a better understanding of the local natural environment.
<b>10</b>	-0.89**	0.03	0.21	0.21	-1.23**	0.57	0.16	1.59**	Providenciales' tourism industry is environmentally friendly.
<b>11</b>	0.33	1.54**	0.86	0.55	1.69*	1.05	0.56	0.97	Marine protected areas are important for ensuring the health of marine resources in the TCI for the future.
<b>12</b>	0.03	-0.61	-0.41	0.34*	-0.11	-0.76*	-0.04	-2.05**	Climate change is the major threat to the TCI and its economy.
<b>13</b>	-1.34	0.34**	-1.61	-0.21**	0.16	-0.12	-1.84**	-0.21	Tourists forgo certain amenities in order to protect coral reefs and marine biodiversity in the TCI.
<b>14</b>	1.84**	-0.92	0.34**	-1.33*	0.70	1.24	0.93	-1.36**	There are limited job opportunities in industries outside tourism in the TCI.
<b>15</b>	0.01	-0.09	-0.49	-0.92	-0.52	-0.86	-0.02	0.46	Resorts with eco-labels appeal to tourists in the TCI.

**Table 3.** Statements and mean Likert scores for Belongers, Non-Belongers, Researchers, and Tourists. Color-coding follows Table 1.

Statement	Belonger n = 55	Non-Belonger n = 25	Researcher n = 36	Tourist n = 165	Statement and Respondent Ranking
1	0.73	0.08	1.25	0.96	Tourism in the TCI is dependent on the health of the marine environment.
2	0.29	-0.36	0.33	0.45	Turks and Caicos Islanders have strong cultural ties to their marine environment.
3	0.47	0.32	-1.67	-0.67	Tourists come to experience the culture of the TCI.
4	-0.56	-0.16	-0.08	0.04	Economic policies are damaging to the TCI environment.
5	-1.69	-1.28	-1.11	-1.27	TCI government represents all stakeholder groups equally.
6	-0.82	-0.88	-1.17	-0.91	Environmental policies in the Turks and Caicos Islands address the concerns of all local stakeholders.
7	0.55	0.28	0.94	0.52	The TCI need to prepare for negative impacts of climate change.
8	1.82	1.56	2.36	1.67	Education is the key for ensuring a stable future for the TCI's marine resources.
9	-0.35	-0.24	-1.31	-0.72	Tourists leave the TCI with a better understanding of the local natural environment.
10	-0.24	0.08	-1.50	-0.71	Providenciales' tourism industry is environmentally friendly.
11	0.89	1.32	1.31	1.60	Marine protected areas are important for ensuring the health of marine resources in the TCI for the future.
12	-0.24	-0.68	1.11	0.05	Climate change is the major threat to the TCI and its economy.
13	-0.75	-0.60	-1.25	-1.21	Tourists forgo certain amenities in order to protect coral reefs and marine biodiversity in the TCI.
14	0.18	0.92	1.00	0.79	There are limited job opportunities in industries outside tourism in the TCI.
15	-0.29	-0.35	-0.22	-0.61	Resorts with eco-labels appeal to tourists in the TCI.



